Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1.-40. (Cancelled)

41.   (Currently Amended) An error correction method for receiving q-bit data having convolutional-encoded bits and unencoded bits as a trellis-encoded signal and for decoding the trellis-encoded signal according to a predetermined algorithm represented by a state transition diagram, the convolutional-encoded bits being obtained by convolutional-encoding lower t bits of an input p-bit data (where p>=2, q>p, and p>t>=1) by a convolutional-encoder having s delay elements and the unencoded bits being upper (p-t) bits of the input p-bit data,

wherein the state transition diagram has branches for respective transitions from 2^S internal states at time i to 2^S internal states at time (i+1), and each of 2^S internal states at time i has a transition to two different internal states at time i+1,

the error correction method comprising the steps of:

converting the received trellis-encoded signal ~~having 2^S internal states~~ into a signal having <u>a</u> <u>format related to a signal encoded by a convolutional encoder having</u> $2^{(S+1)}$ internal states; and

decoding the converted signal using the state transition diagram having 2^S internal states.

42.   (Currently Amended) An error correction circuit for receiving q-bit data having convolutional-encoded bits and unencoded bits as a trellis-encoded signal and for decoding the trellis-encoded signal according to a predetermined algorithm represented by a state transition diagram, the convolutional-encoded bits being obtained by convolutional-encoding lower t bits of an input p-bit data (where p>=2, q>p, and p>t>=1) by a convolutional-encoder having s delay elements and the unencoded bits being upper (p-t) bits of the input p-bit data,

wherein the state transition diagram has branches for respective transitions from 2^S internal states at time i to 2^S internal states at time (i+1), and each of 2^S internal states at time i has a transition to two different internal states at time i+1,

the error correction circuit comprising:

means for converting the received trellis-encoded signal ~~having 2^S internal states~~ into a signal having <u>a format related to a signal encoded by a convolutional encoder having</u> $2^{(S+1)}$ internal states; and

means for decoding the converted signal using the state transition diagram having 2^S internal states.